OEL 1146-64

23 November 1964

MEMORANDUM FOR THE RECORD 25X1A

SUBJECT : Special [ ] Equipment

25X1A

1. It may be desirable to employ the [ ] technique in a special collection requirement aimed at determining the operating schedule for FAN SONG radars. In order to develop a preliminary design, certain items of information are desired. 25X1A

2. [ ] are in charge of this development; technical support will be provided by [ ] of GSD. 25X1A 25X1A

3. In the following check list both questions and statements are used to indicate information required and understandings which are presently being used in preliminary design work.

I. Operational Considerations and Physical Characteristics

A. Allowable weight and size of the equipment; maximum and desirable?

B. Degree of concealment required in the packaging? It is assumed that equipment may be used on safe-houses or may be left in the field.

C. How close can the [ ] equipment be emplaced to the target radar? 25X1A

D. How accurately can the equipment be emplaced? In particular, how accurately can the antenna of the [ ] equipment be pointed towards the target radar? 25X1A

E. The equipment will be operable with batteries or from commercial ac sources.

F. How many units will be required for emplacement, for spares, for turn around, etc?

G. How long will the [redacted] equipment be required to operate unattended? How often will servicing to replace batteries or other parts be available? 25X1A

II. Data Requirements

25X1D

[redacted]

III. Design Considerations

It is presently assumed that the equipment will be designed in a modular fashion so that it may be employed in a number of different configurations. The complexity of the equipment and the attendant reliability will be considerably effected by the techniques employed. In retrieving the data from the [redacted] equipment, these degrees of complexity depend primarily on the logic and memory portions of the equipment and in the method of sending the information back to the collection point. Determination of the technique used must necessarily reflect a number of factors. Areas of consideration are suggested below:

25X1A

A. Allowable frequency for interrogation and response by the [redacted] equipment; allowable power, and allowable transmission period. 25X1A

B. Desired data readout or transmission scheme.

1. [redacted] transmits whenever radar or guidance signal is turned on or off. 25X1A

2. [redacted] sends a warning transmission when the radar signal or guidance signal is turned off. In this case [redacted] requests interrogation for read out. 25X1A 25X1A

3. Accumulate for 24 hours or some other suitable period and read out and reset on command.

4. Accumulate as in 3 above but read out on schedule. Note that 1 and 2 eliminate the requirement for a receiver as part of the equipment.

C. Identification of individual [redacted] equipment required. 25X1A

1. Since all equipments will include a timer, the equipment can be programmed to read out on a particular schedule and the transmitting equipment being identified by its schedule.

2. Identification can be accomplished through frequency selection.

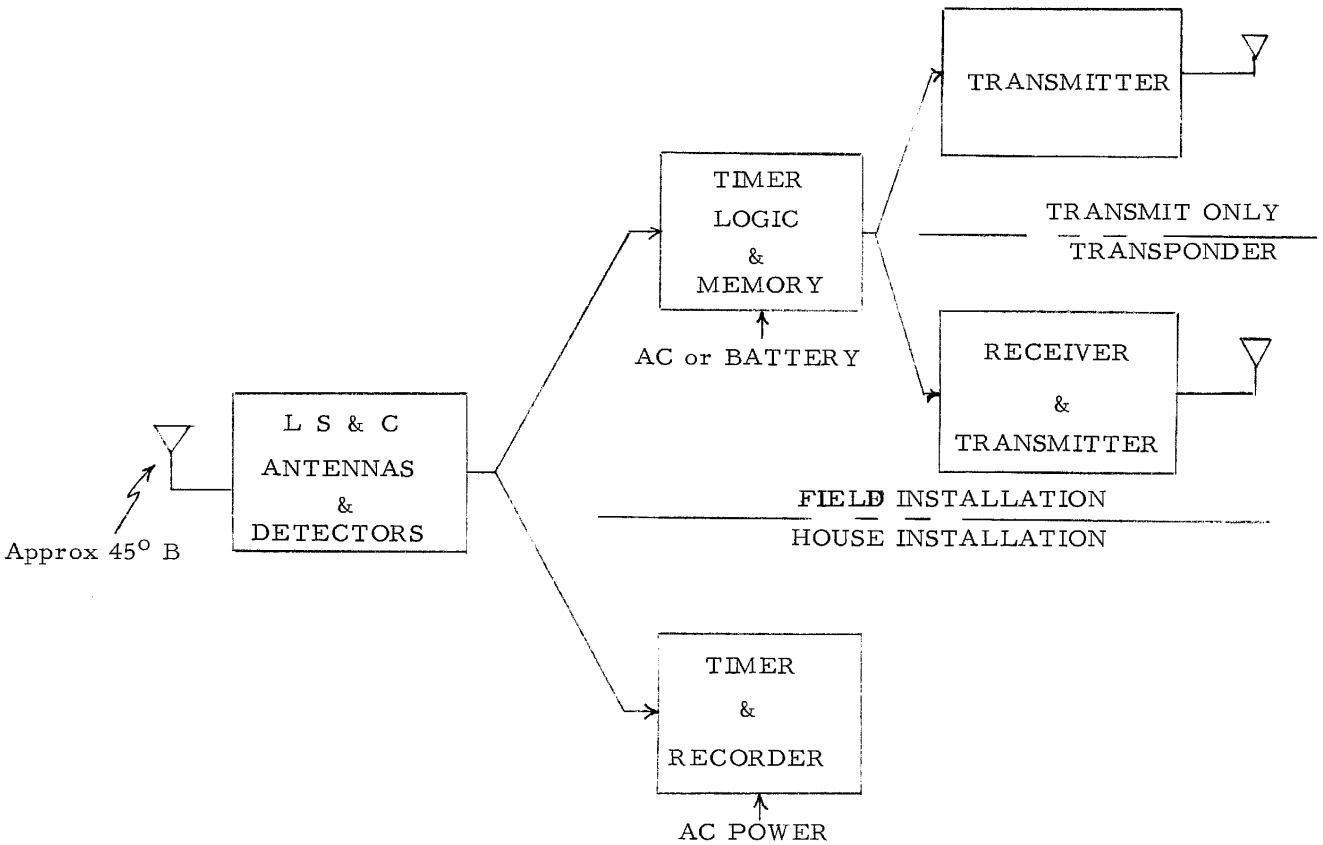
3. If a transponder is used, an interrogation code can be used to select the particular equipment from which read out is desired.

D. Modular design alternatives are indicated in the attached block diagram. 25X1A

[redacted]

DAD/S&D

Attachment



BLOCK DIAGRAM OF SYSTEM OPTIONS
Blocks show possible modular breakdown

Approved For Release 2002/06/14 : CIA-RDP71B00185A000100060115-0

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DAD/S&D: [redacted] kaa

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